INTERNATIONAL DEVELOPMENT RESEARCH CENTRE

CENTRE DE RECHERCHES POUR LE DEVELOPPEMENT INTERNATIONAL

CANADA

March 1981

TO EDITORS

Bananas, bacteria, and bamboo are the subject of articles from Africa and Asia in this month's package of *IDRC Features*.

-From Cameroon, science writer Jean-Marc Fleury reports on a minor revolution in agriculture that is affecting the banana and its "poor relation" the plantain. For your agriculture or food pages?

-From India, journalist and environmentalist Anil Agarwal describes the chance discovery that has some of the world's top scientists believing they are on the trail of an environmentally safe pesticide to kill pests like mosquitoes and blackfly. For the world news page?

-Bamboo is so familiar a product that we rarely think about its importance. But it is vital to rural people in many countries, and has a history going back 5000 years, reports Xu Wen of China Features.

-*Science World*, our monthly column of international science news, looks at ways to produce fertilizer from rocks, fuels from oilseeds, and steaks from the wilds. Use as a column, or as separate briefs to fill out your news pages.

IDRC Features are articles by reputable writers from around the world, dealing with topics related to science and technology for development in a popular style. The service is published 10 times a year by the Communications Division of the International Development Research Centre, and distributed free of charge, primarily to news media in Third World countries.

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FEATURE

A monthly features service on scientific, technical, and educational subjects pertinent to development.

Words: 900 approx.

THE BANANA: FRUIT OR VEGETABLE?

by JEAN-MARC FLEURY

On the fertile slopes of Mount Cameroon, a few hundred plantain trees have found their place in the sun, amid vast banana plantations. Soon, the best of them will be sent for cultivation in other regions of the country.

The banana occupies more hectares of land in Africa than on any other continent. In Cameroon, for example, which is a country of the humid forest zone, the banana is the main agricultural product. The country exports 84,000 tonnes of bananas every year, while the inhabitants consume about one million tonnes. The banana of which Cameroonians are most fond, however, is not the variety they export.

For the inhabitants of temperate countries who import the banana, it is essentially a fruit that is eaten uncooked; but in Africa, it is mainly a vegetable that is roasted or boiled. This is because the genus *Musa*, the botanical name for the banana, is divided into two groups: the banana fruits, including the "Gros Michel" variety which has now been decimated by disease, but has the best flavour, and the plantain, whose starch-rich pulp is similar to that of tubers.

In some regions of Uganda and Tanzania, people consume more than four kilograms of plantains daily, after boiling and pounding them into a paste. Other varieties are also used to make beer, or are cut into chips and dried to be preserved in case of famine. In Cameroon, every inhabitant consumes an average of 150 kg of plantains per year, and they are often eaten more than once a day.

Despite its importance, the plantain has been the subject of very little research in Africa. "Just five years ago, nothing was being done on the plantain in Africa," affirms Tezenas du Montcell, agronomist in charge of the plantain project at the Agricultural Research Institute of Cameroon (IRA). "No one has ever been concerned about it because it is not an export crop."

As a matter of fact, scientific work on the most important Cameroonian food crop really started with the recruitment of the French researcher by the IRA, as part of a project financed by the International Development Research Centre of Canada. At the moment, the varieties collected at the Ekona research station include some 50 cultivars -- a cultivar being a variety that has been or is still the subject of agricultural production. "We now have the world's largest collection of plantain varieties," said Tezenas du Montcell. "We have all but a dozen or so."

The objective of the Ekona research team is, first of all, to understand the plantain better, because the botanical classification of its varieties is still confusing. The team is also trying to increase the plantain's resistance to drought and improve yields, while preserving varieties with the most appealing flavour. At the moment, two varieties -- the "French Sombre" and the "Njock Korn", are particularly promising.

The gigantic Musa plants, develop from an underground rhizome or living root stock. Their stem is simply the result of the close entwining of the leaf sheaths, which end in a tuft. A long flowering stalk which later bends downward sprouts from the middle of the stem once a year, and its flowers bear the bunch of bananas or plantains.

A plantain tree normally has three or four cycles of 12 to 14 months before it is replaced by a new plant. Each cycle begins with a young shoot sprouting from around the root, but sometimes the mother plant retards the shoot's growth, unduly prolonging the cycle. In Ekona, researchers are trying to make this cycle uniform, and to gain mastery of harvest intervals, either by planting two suckers which will produce at six-month intervals, or by staggering planting times.

The plantain has also been tested to grow with the peanut and the cocoyam. The results show that the peanut has a beneficial effect because it eliminates weeds and fertilizes the soil, whereas the cocoyam

not only drains the soil of its nutrients, but also competes with the plantain, retarding its growth by as much as three to four months.

The research conducted near Mount Cameroon is of great importance because plantain cultivation will develop significantly not only in Cameroon, but also in other countries. Cameroonian agronomists expect that their country will soon be exporting plantains to Nigeria and Gabon. For their part, large corporations are following the research work with keen interest. The HEVECAM corporation, which is preparing 15,000 hectares of rubber plantations in l'Océan province, hopes to cultivate extensive plantain farms which will provide food for some 15,000 plantation workers and their families who will live in the vicinity of this huge plantation. The Food Development Authority (MIDEVIV), has also set up a virtual plantain belt around Yaounde, to supply the capital. Finally, in Gabon, there are plans for a commercial project of 200 hectares to be planted exclusively with plantain.

In the past, most families grew their plantain in their compounds, but with the rapid urbanization of African countries, a significant plantain market is developing. It is therefore important that smallholders or large corporations cultivate the best varieties available if their efforts are to be rewarded.

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IDRC-F161e